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SECTION 4: DEBT MANAGEMENT

Overview

The fundamental objective of debt management is to ensure the Government is able to meet its financing needs at the minimum cost over the long term, while maintaining a well-functioning market for government securities. In a dynamic and challenging global environment, it is crucial to balance between cost and related risks, such as currency and rollover risks. Towards this, the Government has been implementing prudent debt management strategies, while adhering to stipulated debt rules. Among the strategies are to focus on ringgit-denominated issuance aimed at supporting the domestic bond market while reducing cost and minimise foreign exchange risk exposure. Meanwhile, issuance of offshore borrowings is intended to create a benchmark yield curve, diversify investor base and gain natural hedge. The issuances are also focused on medium- and long-tenured papers to ensure a well-spread maturity profile. In addition, to support a liquid and well-functioning market, the Government strives to promote transparency through open bidding issuances where diverse investors can transact confidently, thus encouraging competitive pricing of government securities.

Furthermore, a centralised debt management team is important to ensure effective strategy development and orderly implementation of the overall debt management of a country. In this regard, the Government has announced the establishment of the Debt Management Office (DMO) on 15 May 2019 to enhance the processes and governance of the overall debt and liability management. The DMO is tasked to monitor and review potential risks that may arise from the Federal Government debt, government guarantees and other liabilities such as public private partnership commitments.

Financing

The Government's borrowing programme is determined by projected funding requirements through refinancing of maturing debts and estimated fiscal deficit. For 2019, the Federal Government is expected to raise gross borrowings of RM135.2 billion or 8.9% of GDP, of which

94.5% is domestic borrowings, while the remaining is offshore issuances. Gross proceeds will be utilised mainly for principal refinancing amounting to RM83.3 billion and deficit financing (RM51.8 billion). The principal repayments consist of maturing Malaysian Government Securities (MGS) of RM43.4 billion, Malaysian Government Investment Issues (MGII) amounting to RM24 billion, Treasury bills totalling RM14 billion, Government Housing Sukuk (SPK) of RM1.6 billion and offshore loans amounting to RM0.3 billion.

Gross domestic borrowings are estimated to reach RM127.7 billion of total gross borrowings. The issuance of MGS is expected to register RM57.2 billion or 42.3% of total gross financing, while RM58.5 billion will be raised through MGII. In addition, Treasury bills amounting to RM12 billion are projected to be issued for the purpose of cash flow management. The Government regularly issues medium- and long-term papers in the domestic market as benchmark securities to develop a benchmark yield curve and leverage on low-interest-rate

**Table 4.1. Federal Government Financing
2018 – 2019**

	RM million		Share (%)	
	2018	2019 ²	2018	2019 ²
Gross borrowings	131,600	135,164	100.0	100.0
Domestic	131,564	127,700	99.9	94.5
MGS	51,030	57,200	38.8	42.3
MGII	64,305	58,500	48.9	43.3
Treasury bills	16,229	12,000	12.3	8.9
Offshore	36	7,464	0.1	5.5
Market loans	-	7,434	-	5.5
Project loans	36	30	0.1	0.0
Repayments	77,493	83,279	100.0	100.0
Domestic	77,137	83,012	99.5	99.7
Offshore	356	267	0.5	0.3
Net borrowings	54,107	51,885	-	-
Domestic	54,427	44,688	-	-
Offshore	-320	7,197	-	-
Change in assets¹	-722	-125	-	-
Total deficit financing	53,385	51,760	-	-

¹ (+) indicates a drawdown of assets; (-) indicates accumulation of assets.

² Estimate.

Source: Ministry of Finance, Malaysia.

environment. Benchmark papers may be reopened to enlarge outstanding issuance sizes to promote market liquidity.

In addition, long-term securities have also been issued to establish a benchmark yield curve for longer-tenured papers. Over the last five years, share of long-term papers of 10-year and above increased from 38.4% in 2015 to 62.8% of total issuances in 2019. This is in line with the debt management strategy to mitigate rollover risks by expanding the tenure of issuances to establish a well-spread maturity profile.

In the first eight months of 2019, the Government received a total bid amounting to RM190.9 billion against issuances of RM69.5 billion, indicating a strong demand for MGS and MGII. The average bid-to-cover (BTC) ratio stood at 2.81 times, a significant increase compared to the corresponding period in 2018 (2.28 times), reflecting investors' confidence and deep liquidity in the domestic financial market. Demand for these papers was supported by increased preference towards fixed income securities, US Federal Reserve (Fed) rate cut, potential global monetary easing and moderate inflation.

The Government continues to facilitate the development of Malaysia's Islamic capital market with steady issuances of MGII and Malaysia Islamic Treasury Bills (MITB). This is to further support a conducive environment to promote Malaysia as the premier Islamic financial market. The strong demand for MGII provides an opportunity for the Government to raise funds at a lower cost, creating an efficient price-discovery process for Shariah-compliant instruments. This was reflected through spreads between yields on the 10-year MGS and MGII which narrowed from 17 basis points (bps) in December 2018 to 4 bps in August 2019. In addition, MGII recorded a significantly higher average BTC ratio at 3.11 compared to MGS at 2.48 times. The oversubscribed issuances and preference towards MGII indicate a growing demand for Shariah-compliant papers.

The Government securities yield curve shifted downward across all tenures during the first eight months of 2019. Yields declined at an average of 80 bps compared to the average yield in 2018, with the long-term MGS yields decreasing the most, within the range of 95 to 109 bps. Yields for long-tenured papers trended downwards amid continued demand for longer-dated securities, mainly driven by improved investor risk appetite following interest rate reduction by the Fed. Meanwhile, the short- and medium-term yields narrowed between

50 and 75 bps. The yield curve was also slightly flattered with the 10-year/3-year MGS yields spread, narrowing from 45 bps to 20 bps.

In the secondary market, yields were lower following Bank Negara Malaysia (BNM) overnight policy rate (OPR) cut in May by 25 bps. Yields further reduced in July and August 2019, extending to all tenures as the demand was supported by lower inflation expectations and market's perception towards BNM's cautious tone in its July 2019 Monetary Policy Committee meeting. Meanwhile, BNM's announcement of new measures to further liberalise the foreign exchange administration and positive engagement with FTSE Russell have kept yields lower. Yields continued to decline across the entire maturity spectrum towards end-August 2019 driven by increasing anticipation of further monetary easing by central banks globally. Since the beginning of the year until end-August 2019, yields on the 3- and 5-year MGS were lower by 48 and 53 bps, respectively. These rates have trended down to the level that was recorded in 2016. Likewise, the 10-year MGS yield has significantly improved by 77 bps, recording a six-year low since July 2013.

The domestic capital market recorded a net foreign fund inflow in February and March 2019. However, outflows were registered in April and May 2019 following the FTSE Russell announcement on the possible exclusion of Malaysia from the World Government Bond Index (WGBI), coupled with US-China trade tensions. The trend reversed since June 2019 onwards as monetary easing by global and regional central banks drove investors to search for attractive yields across regional markets, including Malaysia. Foreign demand for MGS rebounded, whereby from January to August 2019 a net inflow was recorded at RM7.6 billion (2018: net outflow of RM18.3 billion). In addition, ongoing negotiations between US-China trade talks and a rate cut by the Fed boosted flows into MGS in July and August 2019. The positive trend is expected to continue with the recent reaffirmation of Malaysian bonds on WGBI by FTSE Russell.

Gross offshore borrowings in 2019 are expected to register RM7.5 billion, primarily from market loan issuance. On 15 March 2019, the Federal Government issued JPY200 billion Samurai bond with a maturity period of 10-year at an annual coupon rate of 0.53%. This marks the Government's return to the Japanese bond market after a 30-year absence and is the largest JBIC-guaranteed sovereign bond issuance in the market.

Information Box

Government of Malaysia's 2019 Samurai Bond

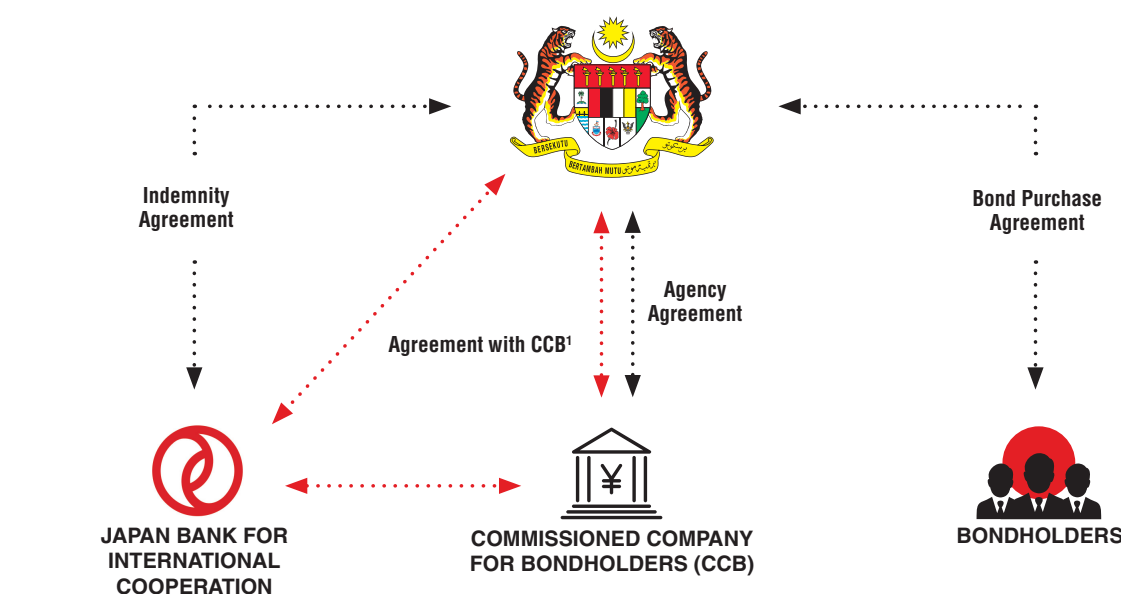
Introduction

On 15 March 2019, the Government of Malaysia (GOM) successfully issued its JPY200 billion 10-year Samurai bond¹ at an annual coupon rate of 0.53%, marking the Government's return to the Japanese bond market after a 30-year absence. The issuance was guaranteed by Japan Bank for International Cooperation (JBIC) under its Guarantee and Acquisition toward Tokyo market Enhancement (GATE) programme, sold only to Japanese qualified institutional investors. JBIC provided a guarantee with a coverage ratio of up to 95% of the present value of total cash flows. Proceeds from the issuance are used for general purposes, to finance development projects and programmes, which among others include building schools, hospitals, roads and provide access to utilities. The government-to-government (G2G) arrangement is the effort by both Prime Minister Tun Dr Mahathir Mohamad and Prime Minister Shinzo Abe to foster closer economic and cultural ties between Malaysia and Japan.

Samurai Bond Transaction

The issuance marks the largest 10-year single tranche Samurai bonds either in public format or in JBIC-guaranteed format. The transaction re-establishes Malaysia's strong standing with the Japanese investor base, while securing long-term financing from the Japanese market.

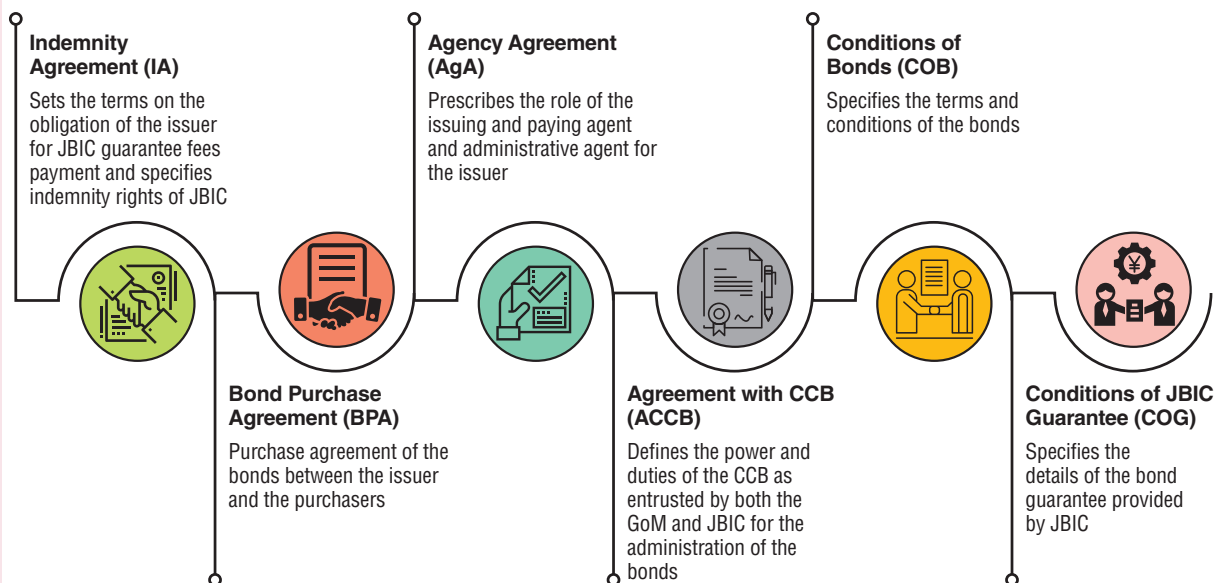
Figure 1: Transactions of GOM's Samurai Bond Issuance



¹ ACCB is a tripartite agreement between GOM, JBIC and CCB.
Source: Ministry of Finance, Malaysia.

The non-deal roadshow was conducted on 7 and 8 February 2019 focusing on main investors in Tokyo. The roadshow provided comprehensive investor coverage through group seminar and 14 private meetings. During the engagement period, investors expressed strong interest in the issuance, reflecting their confidence towards Malaysia's stable macroeconomic fundamentals, governance and structural reforms.

¹ A Samurai bond is a yen-denominated bond issued in Japan by a non-Japanese issuer and subject to Japanese regulations.

Figure 2: Transaction Agreements

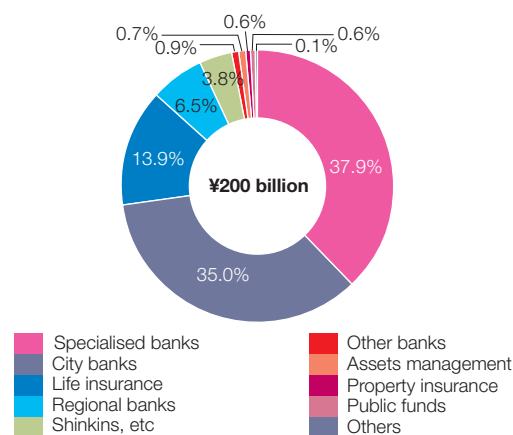
Sources: Ministry of Finance, Malaysia.

Investors' Distribution and Profile

A wide range of quality investors participated in the transaction with strong demand from specialised banks, city banks,² life insurance and regional banks. Main investors such as specialised banks and city banks placed large size orders, which supported the book building. At the same time, several regional investors³ also placed orders larger than they usually would, indicating enthusiastic reception by Japanese investors on Malaysian papers. In terms of the number of investors, a total of 46 investment firms participated, of which 31 were from regional investors. The Government received a total interest amounting to JPY324.7 billion (RM11.9 billion), translating into an oversubscription of 1.6 times than the issuance amount.

Conclusion

The overwhelming response to the Government's Samurai bond issuance reflects strong confidence among Japanese investors on Malaysia's economic fundamentals. The transaction was particularly exceptional, as it was initiated by G2G to foster closer economic and cultural ties between the two countries. Furthermore, it was the largest single tranche Samurai bond issued with a competitive coupon rate. The issuance further enhances diversification of funding base while strengthening Malaysia's position as among the leading investment hub within the region.

Figure 3. Allocation by Investor Type

Source: Ministry of Finance, Malaysia.

² City banks are large in size, with headquarters in major cities and branches in Tokyo, Osaka, other major cities, and their immediate suburbs.

³ Regional investors are regional banks and shinkins, etc (Shinkin, Shinren and Shinyo Kumiai Banks).

Federal Government Debt

Improving fiscal transparency and accountability are key components in strengthening public debt management. In this regard, the Government has established the Debt Management Committee (DMC) on 15 May 2019 with the main objective to formulate a sustainable debt management policy by reducing debt in the medium and long term while minimising risk exposure. The DMC is also tasked to address concerns over risks associated with the Federal Government domestic or offshore borrowings, government guarantees and any policy direction that may impact the fiscal and debt position.

The Federal Government issues debt instruments in the domestic and offshore markets with the primary purpose to finance development expenditure needs and refinancing of maturing debts. As at end-June 2019, the Federal Government debt stood at RM799.1 billion or 52.7% of GDP, below the self-imposed limit of 55%. The debt comprised 96.3% of securities denominated in ringgit while the balance of 3.7% is from offshore borrowings mainly in US dollar and yen. With the availability of deep and liquid domestic capital market as well as robust institutional investors, the Federal Government is able to access the debt market, thus reducing foreign exchange exposure in balancing cost-risk trade-off.

The management of Federal Government debt is governed and defined in accordance with specific laws. Conventional debt instruments namely MGS and Malaysian Treasury Bills (MTB) are governed under the Loan (Local) Act 1959 [Act 637] and the Treasury Bills (Local) Act 1946 [Act 188], respectively while Islamic securities, MGII and MITB are issued under the Government Funding Act 1983 [Act 275]. Act 637 and Act 275 authorise the Federal Government to raise funds within Malaysia for development expenditure and refinance maturing debts. These Acts specify the statutory limit of Federal Government outstanding debt instruments, namely MGS, MGII and MITB shall not exceed 55% of GDP. As at end-June 2019, the outstanding amount of these instruments stood at RM737.5 billion or 48.6% of GDP. Meanwhile, Act 188 restricts the outstanding MTB at RM10 billion (end-June 2019: RM4.5 billion). In addition, the foreign-denominated currency debt is capped at RM35 billion under the External Loans Act 1963 [Act 403]. As at end-June 2019, the outstanding offshore borrowings amounted to RM29.2 billion. The thresholds set under these legislations serve as a control mechanism to ensure prudent and sustainable debt management.

Domestic debt stood at RM769.9 billion as at end-June 2019, mainly comprising MGS (RM404.2 billion) and MGII (RM330.3 billion). MGS remained as the primary debt instrument

**Table 4.2. Federal Government Debt by Instrument
2018 – 2019**

	RM million		Share (%)		Share of GDP (%)	
	2018	2019 ¹	2018	2019 ¹	2018	2019 ¹
Domestic debt	719,545	769,867	97.1	96.3	49.7	50.7
MGS	380,345	404,167	51.3	50.6	26.3	26.6
MGII	304,300	330,300	41.1	41.3	21.0	21.8
SPK	28,400	27,900	3.8	3.5	2.0	1.8
Treasury bills	6,500	7,500	0.9	0.9	0.4	0.5
Offshore borrowings	21,504	29,241	2.9	3.7	1.5	2.0
Market loans	15,907	23,664	2.1	3.0	1.1	1.6
Project loans	5,597	5,577	0.8	0.7	0.4	0.4
Total	741,049	799,108	100.0	100.0	51.2	52.7
<i>Memorandum item:</i>						
Non-resident holdings of ringgit-denominated debt securities	165,777	165,599	23.0	21.5	11.5	10.9

¹ End-June 2019.

Source: Ministry of Finance, Malaysia.

Table 4.3. Debt Legislative and Administrative Guidelines

Rules	Statutory	Administrative
Borrowings are only to finance development expenditure	Loan (Local) Act 1959	Current balance always in surplus to ensure operating expenditure is financed by revenue
Domestic debt ceiling (MGS, MGII, MITB)	Not exceeding 55% of GDP Statute Paper 76 of 2009, Loan (Local) Act 1959 and Government Funding Act 1983 (End-June 2019: 48.6%)	
MTB ceiling	Not exceeding RM10 billion Treasury Bills (Local) Act 1946 (End-June 2019: RM4.5 billion)	Self-imposed limit of 55% of GDP (End-June 2019: 52.7%)
Offshore borrowing ceiling	Not exceeding RM35 billion Statute Paper 77 of 2009, External Loans Act 1963 (End-June 2019: RM29.2 billion)	
Limit of debt service charges (DSC)	Allocation for debt service charges are classified as charged items Federal Constitution Article 98(1)(b)	DSC $\leq$ 15% of revenue (2019 ¹ : 12.5% of revenue)

¹ Estimate.

Source: Ministry of Finance, Malaysia

with a share of 50.6%, followed by MGII, contributing 41.3% to total Federal Government debt. Treasury bills, namely MTB and MITB, are short-term securities with original maturities of 3-month, 6-month, 9-month and 1-year issued for cash flow management. As at end-June 2019, outstanding Treasury bills stood at RM7.5 billion, accounting for 0.9% of total Federal Government debt. The Government periodically issues Treasury bills at a discount through a competitive auction to finance any shortfall in serving Government's monthly cash flow commitment.

MGII was first issued in 1983 to allow local Islamic banks to hold Shariah-compliant papers that meet their liquidity requirements. This effort paved the way for the development of Islamic finance in the domestic market and subsequently positioning Malaysia as the international Islamic financial hub. The share of MGII to total outstanding debt has increased from 33.9% in 2015 to 41.3% as at end-June 2019.

The SPK issued by the Federal Government prior to the establishment of the Public Sector Home Financing Board (LPPSA) stood at RM27.9 billion or 3.5% of the total debt. The Federal Government

will continue to serve the debts until its maturity in 2024. Since its inception in 2016, LPPSA has issued sukuk to provide funding for civil servant's housing loans and will serve its own debt obligations.

As at end-June 2019, outstanding **offshore borrowings** which consist of market loans and project loans amounted to RM29.2 billion. These borrowings comprise loans in foreign-denominated currencies, mainly the US dollar (54.5%) and yen (44.7%). After taking into account the recent Samurai bond issuance of JPY200 billion in March 2019, market loans stood at RM23.6 billion. Meanwhile, project loans amounting to RM5.6 billion were from existing bilateral and multilateral arrangements to finance specific programmes and infrastructure projects such as universities, sewerage and water reservoir.

Resident holders of the Federal Government debt remained well-spread with holdings of RM609.1 billion, accounting for 76.2% of the total. A diversified investor base supports an active secondary market for the Government securities, thus keeping funding costs low and stable. Domestic holders primarily consist of large and long-term investors such as Employees

**Table 4.4. Federal Government Debt by Holder
2018 – 2019**

	RM million		Share (%)		Share of GDP (%)	
	2018	2019 ³	2018	2019 ³	2018	2019 ³
Residents	558,563	609,061	75.4	76.2	38.6	40.2
Employees Provident Fund	218,755	233,987	29.5	29.3	15.1	15.4
Retirement Fund (Incorporated)	24,414	26,693	3.3	3.3	1.7	1.8
Insurance companies	35,890	34,401	4.8	4.3	2.5	2.3
Banking institutions	228,732	258,233	30.9	32.3	15.8	17.0
Development financial institutions	20,288	18,354	2.7	2.3	1.4	1.2
Others ¹	30,484	37,393	4.2	4.7	2.1	2.5
Non-residents	182,486	190,047	24.6	23.8	12.6	12.5
Fund manager	67,034	72,985	9.1	9.1	4.6	4.8
Central bank, supranational and sovereigns	55,910	51,850	7.5	6.5	3.9	3.4
Banking institutions	18,365	20,727	2.5	2.6	1.3	1.4
Pension funds	29,065	31,648	3.9	4.0	2.0	2.1
Insurance companies	3,732	5,106	0.5	0.6	0.2	0.3
Others ²	8,380	7,731	1.1	1.0	0.6	0.5
Total	741,049	799,108	100.0	100.0	51.2	52.7

¹ Includes other non-bank financial institutions, statutory bodies, nominees and trustee companies, co-operatives, securities placed by institutional investors at the central bank and unclassified items.

² Include nominees/custodians, individuals, non-financial corporations, multilateral and bilateral institutions as well as unidentified sectors.

³ End-June 2019.

Source: Ministry of Finance, Malaysia.

Provident Fund (29.3%), insurance companies (4.3%) and Retirement Fund (Incorporated) or KWAP (3.3%). Meanwhile, banking institutions, development financial institutions and others collectively hold 39.3% of the total.

Non-residents hold RM190 billion or 23.8% of total outstanding Federal Government debt. Long-term and institutional investors consist of mainly central banks, supranationals and sovereigns, pension funds, insurance companies and others accounted for 12.1%. Likewise, fund managers and banking institutions hold 9.1% and 2.6% of the total debt, respectively. Furthermore, non-resident holdings in MGS remain stable at 36.9% of the total MGS outstanding (end-2018: 38.4%).

The average time-to-maturity, indicating the upcoming refinancing needs, is expected to increase from 7.6 years in 2018 to 8.1 years in 2019 after taking into account issuances for the year. This is due to larger issuances of long-tenured papers with a maturity of seven years and above as well as a lower share of outstanding Treasury bills. Thus, the maturity

profile is more favourable with an increase in the share of outstanding debt papers of above 10 years, from 21.4% in 2018 to 25.9% as at end-June 2019. Meanwhile, short-term papers with a maturity of five years and below has been reduced to 43.5% (end-2018: 48.2%). Given the low-interest-rate environment, the Government is expected to benefit from its strategy of issuing more long-tenured papers, leveraging competitive yields and investors' preferences.

In 2019, debt service charges are estimated at RM33 billion or 12.5% of total revenue, contributed by interest payment for domestic loans and offshore borrowings. Of this, 99.7% is contributed by financing cost for market debt instrument while the balance is payments related to project loans. The weighted average interest rate¹ on outstanding market debt instrument as at end-June 2019 stood at 3.848%, lower than 4.106% in 2018. This is largely due to lower average coupon rate for debt papers issued during the first half of 2019 due to favourable low-interest-rate environment, high liquidity and increased investors' confidence.

¹ Calculation of weighted average interest rate only covers MGS and MGII.

Feature Article

Malaysia's Debt Sustainability Analysis**Background**

Effective debt management is important to preserve debt sustainability, strengthen the financial position, ensure macroeconomic stability and safeguard investors' confidence while enhancing sovereign creditworthiness. Towards this objective, various tools are used to assess the sustainability of the debt level. One of the tools utilised for this purpose is the Debt Sustainability Analysis (DSA) developed by the International Monetary Fund (IMF) and World Bank. The IMF defines DSA as a tool to assess a country's capacity to service the debt and finance its policy objectives without unduly large adjustments, which could otherwise compromise a country's stability. To this end, the DSA framework has been developed to conduct public and external debt sustainability analysis as a tool to better detect and prevent a potential crisis.

The objectives of the DSA framework are:

- i. To assess current debt position, which includes its maturity structure, coupon rates and the debt holders;
- ii. To identify vulnerabilities in the debt structure or policy framework so that pre-emptive measures can be introduced prior to payment difficulties; and
- iii. To examine the impact of alternative debt-stabilising policy in case such difficulties happen or are about to occur.

DSA framework is designed for market-access countries (MAC) and low-income countries, comprising two components, namely analysis on public debt and external debt. The analysis framework for both components consists of the baseline scenario and sensitivity analysis. Baseline scenario refers to a set of macroeconomic projections and assumptions that underline the government's policies. Meanwhile, sensitivity analysis is applied to the baseline scenario with various stress tests to determine the dynamics of government debt profile. The outcome of the analysis provides an indication of the level of government's debt vulnerability.

Analysis of Malaysia's Federal Government Debt

Malaysia is categorised under MAC as Malaysia has easy access to the domestic and international capital market. Under MAC, it is crucial to determine whether a country should be classified under a lower or higher scrutiny assessment. Under a lower scrutiny assessment, an emerging economy's debt level and annual public gross financing requirements should not exceed 50% and 10% of GDP, respectively. Although Malaysia's gross financing requirement is around 8% of GDP, Malaysia is classified under higher scrutiny assessment due to its debt¹ level exceeding 50% of GDP.

¹ Debt coverage for Malaysia refers to Federal Government debt only.

A. Baseline Scenario Analysis

1. Macro-Fiscal Assumptions

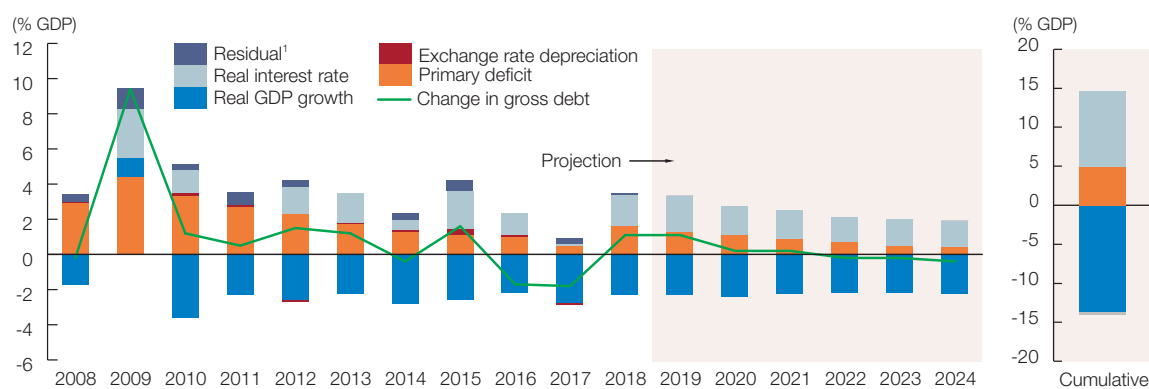
Medium-term macroeconomic and fiscal policy assumptions under the baseline scenario include:

- i. Economic growth is expected to record 4.7% during the first year of projection (2019) and is expected to moderate at an average of 4.5% onwards;
- ii. Revenue collection is projected to grow at 5% per annum while overall non-interest expenditure increasing at 4% annually; and
- iii. Nominal interest rate is projected to remain stable and to increase by 10 basis points in 2024.

2. Analysis

Historical data (2008 – 2018) shows two major factors contributing to debt creating flows are the primary balance (non-interest fiscal deficit) and real interest rate. This was evident especially during the global financial crisis 2009 – 2010 as the Government incurred a higher deficit for fiscal stimulus. Historically, debt exposure to the offshore market was minimal (less than 5% of total debt), and this is expected to continue in the projection years. Thus ringgit depreciation has a marginal impact on debt creation. Additionally, nominal GDP growth is also one of the determinants to the debt creating flow. The debt-to-GDP ratio will improve positively as GDP growth remains and vice versa.

Figure 1. Debt Creating Flows



¹ Refers to current year change in assets.
Source: Ministry of Finance, Malaysia and IMF.

The Federal Government gross financing needs are projected to remain below the DSA benchmark limit for emerging countries at 10% of GDP. The analysis shows gross financing needs will decline from 8.9% in 2019 to 7.4% in 2024 based on the assumption of gradual fiscal consolidation in the medium-term. Likewise, the Federal Government debt is projected to remain manageable, registering 50.2% of GDP in 2024, below the self-imposed limit of 55%.

3. Alternative Scenario

Aside from the baseline scenario, the model also provides alternative scenarios which project debt and gross financing needs as a ratio to GDP under the assumption of constant primary balance and historical scenario.

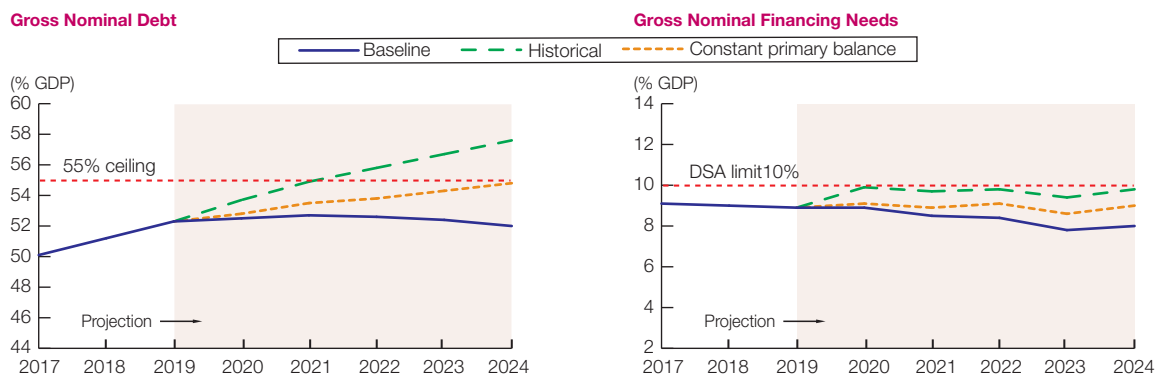
i. Constant Primary Balance

Assuming there is no fiscal consolidation plan throughout the medium-term, the model indicates that debt will increase to 54.6% of GDP compared to 50.2% under the baseline scenario in 2024, but still lower than the self-imposed limit of 55% of GDP. Likewise, gross financing needs will also increase to 8.9% of GDP, lower than the DSA benchmark of 10%.

ii. Historical Scenario

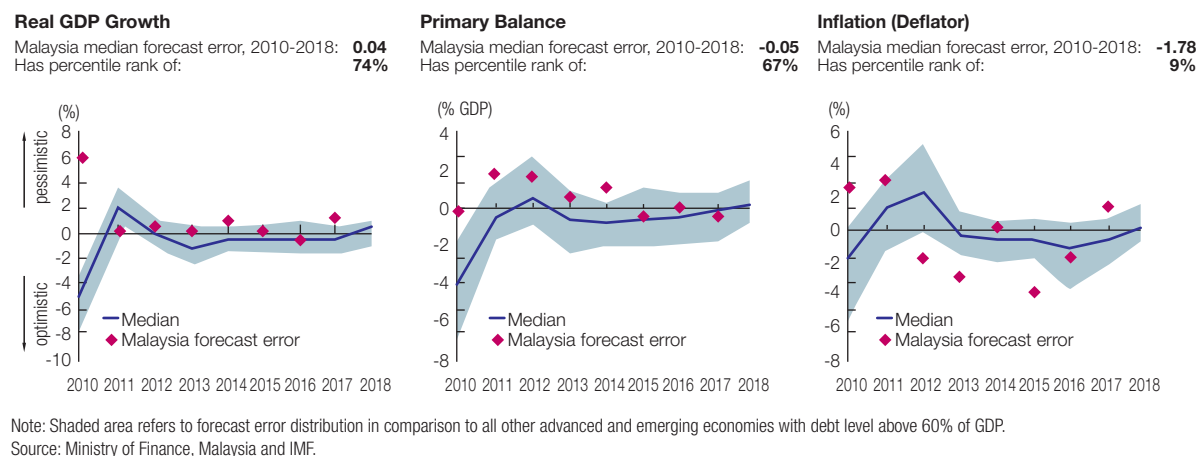
Assuming historical variables trend prevails in the projection period, the model shows the debt is expected to register 57.6% of GDP, exceeding the self-imposed limit. In addition, gross financing needs will also increase to 9.9% of GDP in 2020, almost reaching the DSA threshold of 10%.

Figure 2. Baseline and Alternative Scenario



4. The Realism of Baseline Assumptions

Several tools have been provided in the DSA framework to assess the credibility and robustness of the baseline scenario. This simulation identifies Malaysia's forecast error distribution in comparison to all other advanced and emerging economies with debt level above 60% of GDP. The result indicates that with a relatively high percentile rank of 74% and 67%, assumptions on real GDP growth and the primary balance for the period 2010-2018 are neither too optimistic nor pessimistic. As for the median forecast error for GDP deflator, the model shows the forecast for nominal GDP has been relatively optimistic.

Figure 3. Realism of Baseline Assumptions

B. Sensitivity Analysis

The macro-fiscal stress tests were conducted to assess the sensitivity of the debt dynamics to key exogenous and policy variables under different scenarios. Specifically, this test assesses the impact on debt sustainability in the event shocks occur to economic growth, primary balance and combined shock. In addition, the stress test also applied to contingent liability. Under the sensitivity analysis, the IMF put a limit where the upper threshold of debt and gross financing needs under any shock scenario should not exceed 70% and 15% of GDP, respectively.

i. Primary Balance Shock Scenario

Assuming cumulative deterioration in primary balance of 1.2% of GDP in the year 2020 and 2021, the debt to GDP ratio increase sharply to 54.7% by 2021 and will reach 56.5% by 2024 while gross financing needs reach its highest point of 9.9% of GDP in 2020 and mellow down to 9.2% by 2024. Both indicators remain below the DSA threshold of 70% for debt and 15% for gross financing needs.

ii. Real GDP Growth Shock Scenario

Assuming a shock of 1% standard deviation of real GDP in 2020 and 2021 which result to a drop in real GDP at 2.1% and 1.7%, the debt level is expected to peak at 58.5% in 2021 and reduce to 57.6% by 2024. Gross financing needs will also increase to 10.5% in 2020 and decrease to 8.7% by 2024. Both indicators do not trigger the DSA threshold.

iii. Real Interest Rate Shock

Assuming an introduction of interest rate increases by 200bps in 2020 onwards, with all other assumptions remained as per baseline, debt will increase to 53.6% of GDP by 2024. Gross financing remain stable at 8.6% by 2024. Likewise, both indicators do not trigger the DSA threshold.

iv. Combined Shock Scenario

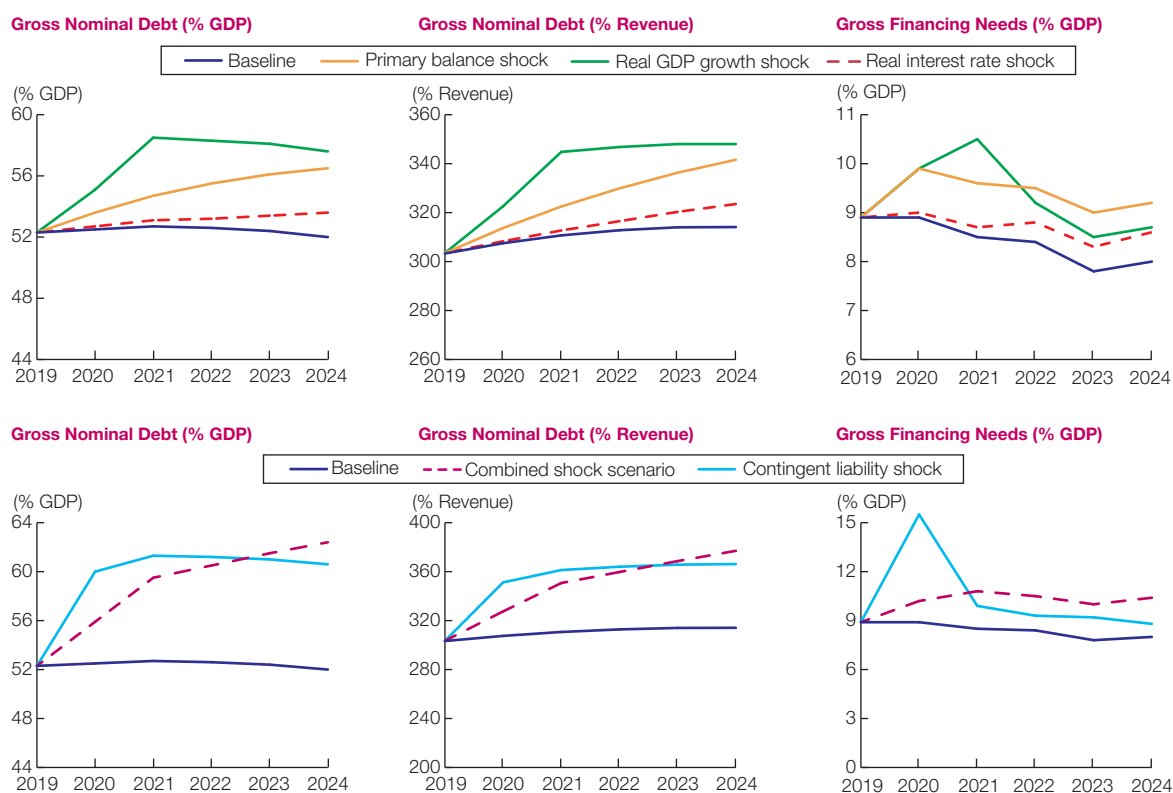
On the assumption that all the scenarios above occur simultaneously as a macro-fiscal shock, the debt is projected to increase to 62.4% of GDP by 2024 while gross financing needs revolve around 10% throughout the projection period, below the DSA threshold.

v. Contingent Liability Shock Scenario

Assuming the Federal Government is obliged to allocate 0.5% of GDP transfers in expenditure due to materialisation of the contingent liability, this will result in debt increasing to 59.6% of GDP in 2020 while gross financing needs increase to 15.5%, exceed the DSA threshold but reduce to 8.8% by 2024.

In general, the projected debt indicators would help the Government to determine its debt affordability and help to formulate precautionary measures to sustain its debt level while maintaining market and investor confidence.

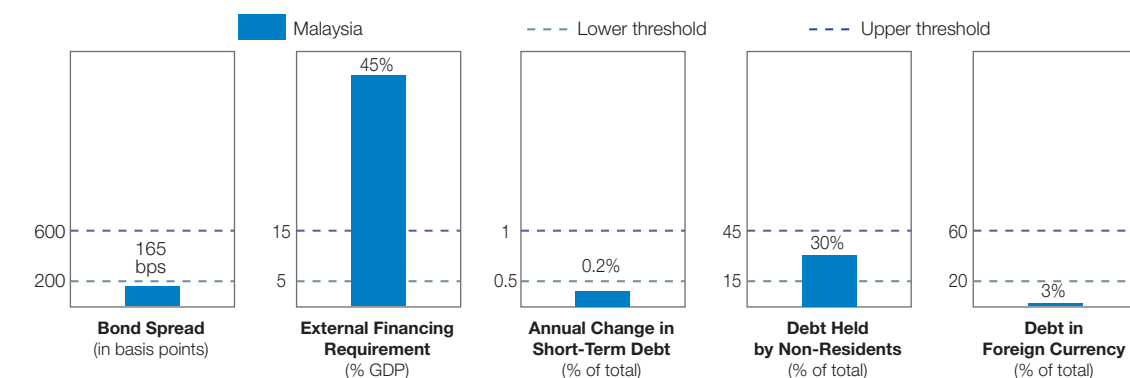
Figure 4. Macro-Fiscal Stress Tests



Source: Ministry of Finance, Malaysia and IMF.

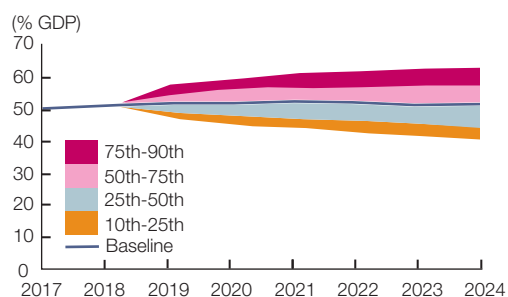
G. Risk Assessment

Another feature of DSA is an assessment of debt profile risk based on five main indicators. The main source of debt profile risk is from external financing requirement indicator, which is defined as the sum of the balance of payments' (BOP) current account, amortisation of medium and long term external debt and short term total external debt at the end of the previous period. According to the model, Malaysia's external financing requirement indicator stood at 45% of GDP, exceeding the 15% upper threshold, signalling high risk. This indicates the redemption amount required for the external debt at remaining maturity is significantly larger than BOPs' current account surplus. Nevertheless, in Malaysia's case, the risk is mitigated through the availability of deep and liquid debt market supported by large domestic institutional long-term investors. In addition, the external debt is backed by substantial non-reserves external assets which can be utilised to meet external debt obligations.

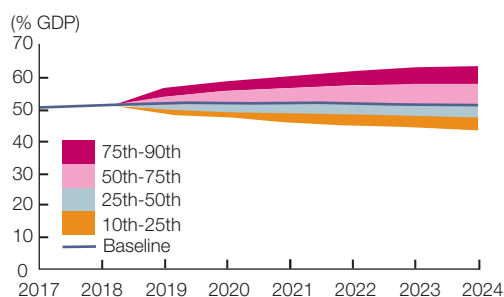
Figure 5. Debt Profile Vulnerabilities

Source: Ministry of Finance, Malaysia and IMF.

The evolution of predictive densities of debt provides a probabilistic view of the uncertainties around the baseline. It shows a spectrum of possible outcomes which incorporates macroeconomic variables and historical data to calibrate persistence of shocks. Under the symmetric scenario, downside risk (debt increment) matches the upside risk (debt reduction), with a 5% probability of the Government debt exceeding 60% of GDP in 2021 and 25% likelihood in 2024. However, under the asymmetric scenario, which assumes downside risk higher than upside risk, the Government debt will exceed 60% of GDP one year earlier compared to the symmetric scenario for both probabilities.

Figure 6. Evolution of Predictive Densities of Gross Nominal Debt**Symmetric Distribution**

Source: Ministry of Finance, Malaysia and IMF.

Asymmetric Distribution**Conclusion**

DSA provides insight on the country's debt burden over the medium term against its sustainable path by identifying vulnerabilities in the existing debt structure or policy framework and examining the impact of alternative debt-stabilising policy path. The baseline scenario indicates that Malaysia's debt level remains sustainable, below the self-imposed limit of 55% and significantly lower than 70% of GDP under the DSA guidance benchmark throughout the projection period. However, some debt indicators remain vulnerable to stress tests, namely real GDP growth, contingent liability and combined macro-fiscal shocks. In relation to the debt profile, the main risk identified from this model is the sizeable external financing needs. Therefore, a gradual fiscal consolidation and debt reduction are crucial to building adequate fiscal buffers, particularly in the event of a global economic and financial crisis. In this regard, a sustainable debt level will further improve investors' confidence, thus safeguarding the country's sovereign rating.

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External Debt

External debt is defined as the nation's offshore obligation of the public and private sectors, which includes offshore borrowings, non-resident holdings of ringgit-denominated debt securities, non-resident deposits and other external debt. As at end-June 2019, the external debt stood at RM931.1 billion or 61.3% of GDP. The slight increase in total external debt was contributed by a sizeable increase in medium- and long-term offshore borrowing primarily by the private sector but was offset by withdrawal in non-resident deposits. Malaysia's external debt remains manageable backed by large availability of banks and domestic companies' external assets that provides a buffer against external risks. Furthermore, medium- and long-term tenure constituted 58.3% of total external debt, reflecting a lower refinancing risk.

Offshore borrowings, the largest component of external debt increased to RM580.5 billion or 38.2% of GDP. Of the total external debt private sector offshore borrowings constituted 21.8%, increased to RM202.8 billion or 13.4% of GDP backed by the drawdown of interbank borrowings and intercompany loans from parent or affiliate companies abroad. In addition, the public sector offshore borrowings stood at RM147.9 billion or 9.7% of GDP, after taking into account the issuance of Samurai bond.

Meanwhile, **non-resident holdings of ringgit-denominated debt securities** remained stable at RM181.9 billion or 12% of GDP. This includes

non-resident holdings of ringgit-denominated Government papers which stood at RM165.6 billion or 21.5% of total Federal Government domestic debts. In contrast, the withdrawal of **deposits by foreign holders** in domestic banking institutions resulted in the decline of non-residents deposits to RM91.3 billion or 6% of GDP.

Public Sector Debt

Public sector debt refers to outstanding debts from all layers of government, namely Federal Government, state governments, non-financial public corporations (NFPCs) and sovereign-guaranteed debt of statutory bodies. As at end-June 2019, public sector debt increased to RM1.1 trillion or 76.2% of GDP due to higher Federal Government debt to finance the fiscal deficit. Federal Government debt remains the largest component with RM799.1 billion or 69.1% of total debt while the balance is from NFPCs (24.8%) and statutory bodies (6.1%).

Statutory bodies' net debt expanded to RM70.1 billion, mainly attributed to additional sukuk issuances by LPPSA to finance civil servant housing loans and by National Higher Education Fund Corporation (PTPTN) for education loans. Meanwhile, the higher NFPCs' debt at RM286.6 billion was due to further drawdown for ongoing infrastructure projects particularly Mass Rapid Transit (MRT), the extension of Light Rail Transit (LRT) line and construction of rail tracks as well as investments in oil and energy sector.

**Table 4.5. External Debt
2018 – 2019**

	RM million		Share (%)		Share of GDP (%)	
	2018	2019 ³	2018	2019 ³	2018	2019 ³
Offshore borrowing	566,943	580,472	61.3	62.4	39.1	38.2
Medium- and long-term debt	333,504	350,709	36.1	37.7	23.0	23.1
Public sector	143,325	147,861	15.5	15.9	9.9	9.7
Federal Government	16,708	24,448	1.8	2.6	1.2	1.6
Public corporations	126,617	123,413	13.7	13.3	8.7	8.1
Private sector	190,179	202,848	20.6	21.8	13.1	13.4
Short-term debt	233,439	229,764	25.2	24.7	16.1	15.1
Non-resident holdings of ringgit-denominated debt securities	180,228	181,938	19.5	19.5	12.5	12.0
Medium- and long-term debt	169,162	174,199	18.3	18.7	11.7	11.5
Federal Government	158,406	163,756	17.1	17.6	11.0	10.8
Others ¹	10,755	10,443	1.2	1.1	0.7	0.7
Short-term debt	11,066	7,738	1.2	0.8	0.8	0.5
Non-resident deposits	98,238	91,301	10.6	9.8	6.8	6.0
Others²	79,478	77,372	8.6	8.3	5.5	5.1
Total	924,887	931,083	100.0	100.0	63.9	61.3

¹ Include private sector and public corporations.² Comprise trade credits, IMF allocation of Special Drawing Rights and miscellaneous.³ End-June 2019.

Note: Total may not add up due to rounding.

Source: Bank Negara Malaysia.

**Table 4.6. Public Sector Debt
2018 – 2019**

	RM million		Share (%)		Share of GDP (%)	
	2018	2019 ¹	2018	2019 ¹	2018	2019 ¹
Federal Government	741,049	799,108	67.9	69.1	51.2	52.7
Domestic	719,545	769,867	65.9	66.6	49.7	50.7
Offshore	21,504	29,241	2.0	2.5	1.5	2.0
Statutory bodies	64,570	70,120	5.9	6.1	4.5	4.6
Domestic	64,570	70,120	5.9	6.1	4.5	4.6
of which: Guaranteed	64,570	70,120	5.9	6.1	4.5	4.6
Offshore	-	-	-	-	-	-
Non-financial public corporations	285,368	286,599	26.2	24.8	19.7	18.9
Domestic	167,775	169,762	15.4	14.7	11.6	11.2
of which: Guaranteed	167,775	169,762	15.4	14.7	11.6	11.2
Offshore	117,593	116,837	10.8	10.1	8.1	7.7
of which: Guaranteed	24,244	24,065	2.2	2.1	1.7	1.5
Total	1,090,987	1,155,827	100.0	100.0	75.4	76.2

¹ End-June 2019.

Source: Ministry of Finance, Malaysia.

Outlook for 2020

Gross financing needs of the Government in 2020 are expected to be primarily sourced from the domestic market and remain below the IMF's threshold for emerging economies. The Government will continue its effort to deepen the onshore market through higher issuances of domestic papers to improve liquidity. Likewise, the need for offshore borrowings will be based on favourable cost at acceptable risks and global financial market conditions.

Moving forward, the Government is committed to its debt consolidation path with a targeted debt-to-GDP ratio below 50% in the medium-term. The establishment of DMC is instrumental in guiding policy direction and strategy while the DMO will ensure smooth implementation of measures to reduce debt to a manageable level. Hence, the Government will improve its processes and tighten procedures for a more coherent execution of effective debt management. In this regard, these efforts

will augur well to anchor positive market expectations and ensure Malaysia's long-term debt sustainability.

Conclusion

As an emerging economy, Malaysia has a relatively manageable level of debt and financing needs, below its stipulated limits. Proceeds from the debt are for development projects, which include building schools, roads, hospitals and clinics as well as providing access to utilities. The Government is committed towards efficient debt management to ensure borrowings made will increase the economic capacity and benefit future generations. In addition, the Government will continue to finance its debt domestically to strengthen the capital market, especially through higher issuance of shariah-compliant instruments to further promote Malaysia as the leading hub for Islamic finance. Concurrently, the Government will continue to reduce its debt-to-GDP ratio through the implementation of gradual fiscal consolidation efforts.

Figure 4.1. Issuance by Maturity

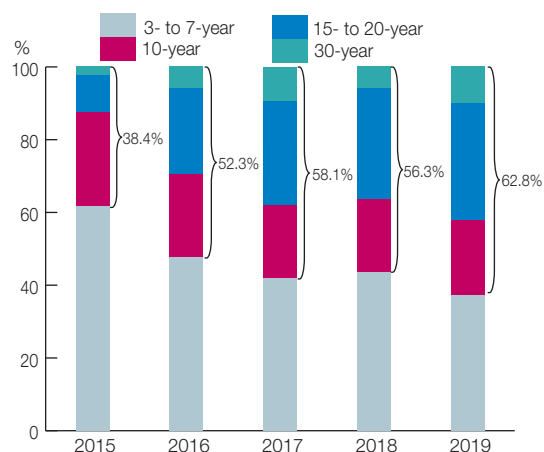


Figure 4.2. BTC Ratios of MGS and MGII

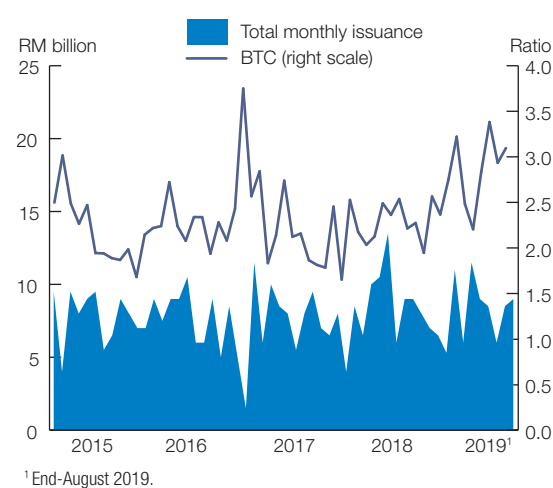


Figure 4.3. MGS Benchmark Yield Curve

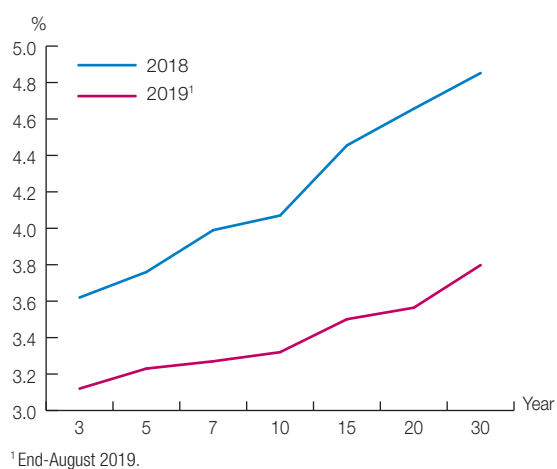
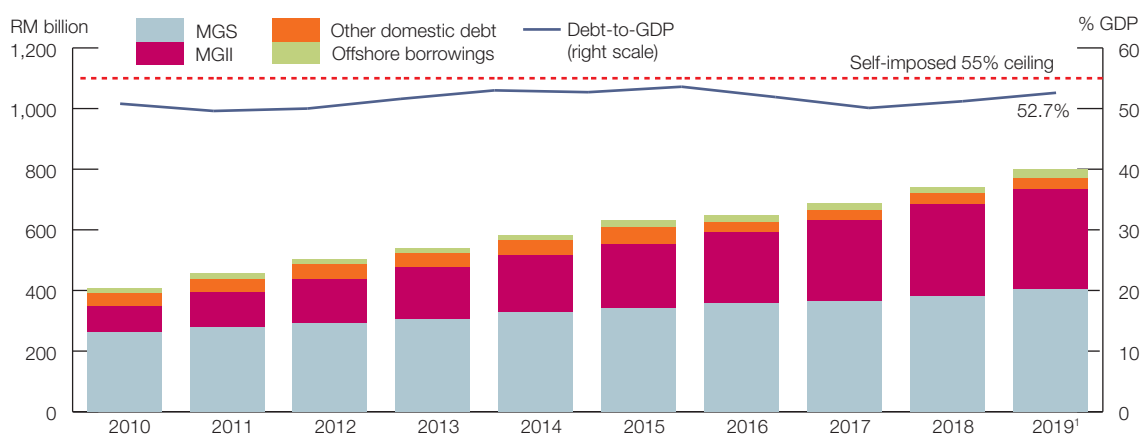


Figure 4.4. MGS Indicative Yields



Figure 4.5. Federal Government Debt Composition



Source: Ministry of Finance, Malaysia, Bank Negara Malaysia and Bloomberg.

Figure 4.6. Federal Government Debt by Holder (End-June 2019)

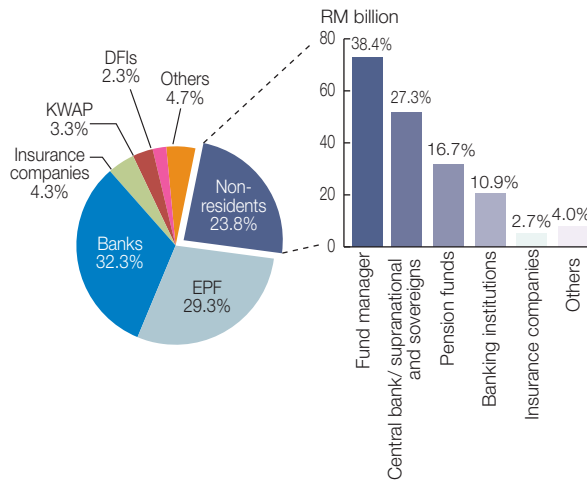
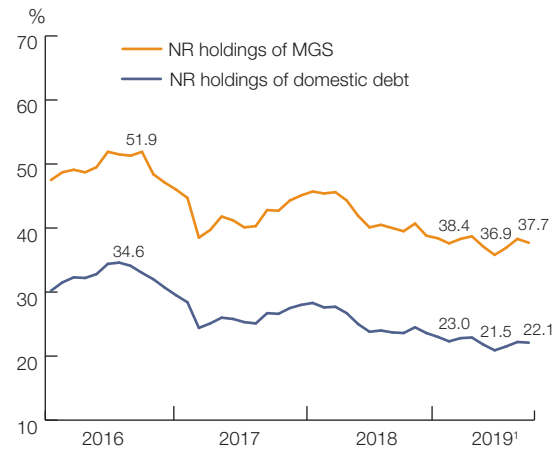
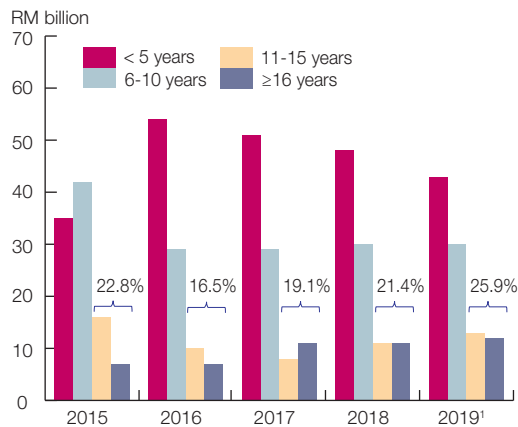


Figure 4.7. Non-Resident Holdings of Ringgit-Denominated Debt Securities



¹ End-August 2019.

Figure 4.8. Federal Government Debt by Remaining Maturity



¹ End-June 2019.

Figure 4.9. Debt Service Charges

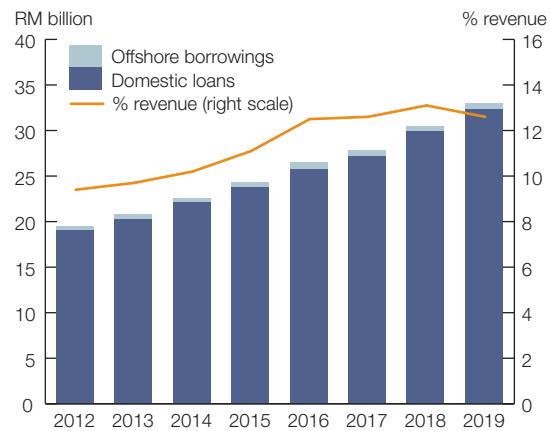
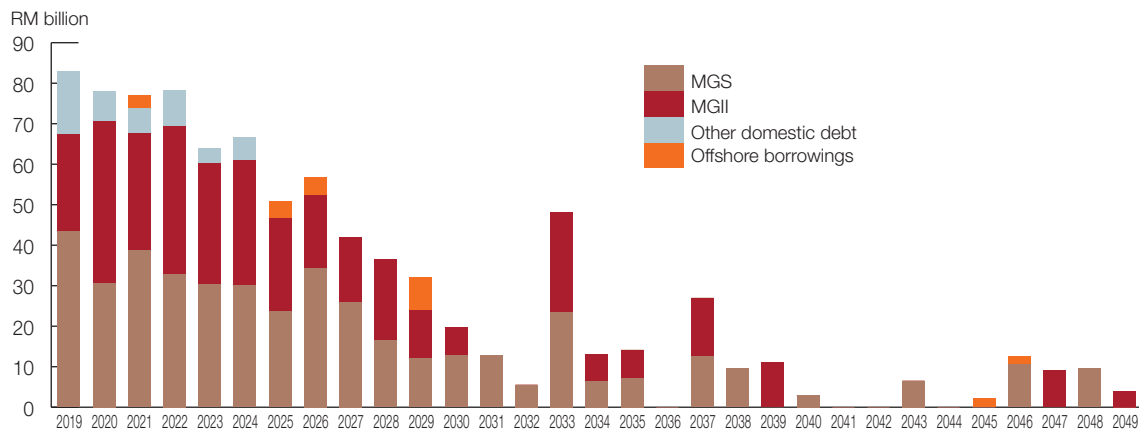


Figure 4.10. Debt Maturity Profile



Source: Ministry of Finance, Malaysia.